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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/720,912	11/24/2003	Herbert Ulmer	FDN-2726	5288
7590	01/05/2006		EXAMINER	LEE, RIP A
			ART UNIT	PAPER NUMBER
			1713	
			DATE MAILED: 01/05/2006	

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/720,912	ULMER ET AL.	
	Examiner	Art Unit	
	Rip A. Lee	1713	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on October 13, 2005.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 2-9 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 2-9 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.

4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.

5) Notice of Informal Patent Application (PTO-152)

6) Other: _____.

DETAILED ACTION

This office action follows a response filed on October 13, 2005. Claims 2-4, and 7 were amended. Claims 1 and 10 were canceled. Claims 2-9 are pending.

Claim Objections

1. Claim 2 is objected to because of the following informalities: The phrase “or their quats,” does not apply to preceding Markush elements, “vinyl caprolactam” and “2-[[butylamino)carbonyl]oxy]ethyl acrylate.” Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 2-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is not clear from claim 2 whether monomers vinyl pyrrolidone, dimethylaminoethyl methacrylate, and/or dimethylaminopropyl methacrylamide are optionally part of the Markush group, or whether they are excluded from the Markush group. Since claims 3-9 depend from claim 2, they are subsumed under the rejection.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 2-6 are rejected under 35 U.S.C. 102(b) as being anticipated by *Bair et al.* (U.S. 5,789,488).

Bair et al. discloses polyvinyl alcohol polymer grafted with water soluble/dispersible monomers such as 2-methacryloyloxyethyl trimethylammonium chloride, dimethylaminoethyl methacrylate, dimethylaminopropyl methacrylamide (claim 1). The ratio of graft monomer to polymer is 95:5 to 5:95 (col. 3, line 2). Another embodiment of the invention is drawn to use of graft monomers such as (meth)acrylic acid, methyl (meth)acrylate, and hydroxyethyl (meth)acrylate (col. 3, lines 55 and 66). Graft polymers are prepared in aqueous medium, and grafting is initiated with ceric ammonium nitrate, although persulfates and peroxides may also be employed (col. 3, line 39).

6. Claims 2-9 are rejected under 35 U.S.C. 102(b) as being anticipated by *Jacquet et al.* (U.S. 4,283,384).

Example 14 of *Jacquet et al.* illustrates the preparation of a 50:50 graft copolymer by grafting quaternized dimethylaminoethyl methacrylate onto polyvinyl alcohol. Example 30 described grafting of PVA with methyl methacrylate. The synthesis is carried out in water using ceric ammonium nitrate as the initiator. Polymers of the invention are used in cosmetic compositions, specifically hair care products (title, abstract, claims 4, 8, and 10).

Response to Arguments

7. The original rejection of claims over Bair *et al.* and Jacquet *et al.* remain in force in light of the unclear claim language (*vide supra*, paragraph 3). Since vinyl pyrrolidone, dimethylaminoethyl methacrylate, and/or dimethylaminopropyl methacrylamide appear to be part of the Markush group, even though they are optional, the disclosures of the prior art would appear to read on the claimed subject matter. Furthermore, Applicants have not traversed the fact that Bair *et al.* teaches use of graft monomers such as (meth)acrylic acid, methyl (meth)acrylate, and hydroxyethyl (meth)acrylate for PVA polymer. Jacquet *et al.* also teaches such an embodiment.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rip A. Lee whose telephone number is (571)272-1104. The examiner can be reached on Monday through Friday from 9:00 AM - 5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached at (571)272-1114. The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <<http://pair-direct.uspto.gov>>. Should you have questions on the access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll free).

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January 3, 2006

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